b.—PATHOLOGY OF THE NERVOUS SYSTEM AND MIND, AND PATHOLOGICAL ANATOMY.

THE PATHOLOGY OF HEMIPLEGIA.—Dr. B. F. Lautenbach, *Phil. Med. Times*, Aug. 3d, takes the view that the unilateral paralysis from cerebral disease is not due to destruction of the motor centres, or interruption of the routes of conduction in the base of the brain, as is usually held. In support of his opinion he cites numerous cases of extensive brain lesion in which motor paralysis did not appear, and the asserted fact that hemiplegia does not occur in the lower animals from destruction of brain substance. (Dr. Lautenbach seems to forget the results obtained by Ferrier in monkeys.) He likewise objects on similar grounds to the view that the paralysis is due to pressure, and also rejects the theory of Brown-Séquard that the paralysis is chiefly the result of an irritation, on the grounds that the effects of irritation are very unreliable and uncertain, and do not justify the conclusion.

The theory of the pathology of hemiplegia that he is inclined to adopt is, that it is the result of polarization. He commenced the study of the effect of irritation of a polarized nerve in 1876. Previously, Nobili, Matteucci, Valentin and Eckhard had shown that muscular contractions caused by the irritation of a motor nerve could be prevented by the passage of a constant or polarizing current through a portion of the nerve, either above or below the point irritated. Later, as is well known, Pflueger, using weaker currents, showed that the excitability was increased on the side of the cathode and diminished on that of the anode. Lautenbach found that the effect of the irritation of a polarized nerve as compared with that of a nerve not polarized, depended largely on the proportion existing between the strengths of the two currents. When an irritating current sufficient to produce tetanus was used, he was able to prevent all contractions by applying simultaneously a polarizing current of a certain strength. "If now," says he, "an irritating current, just sufficient to produce slight muscular contraction, was employed, according to the strength of the polarizing current would the contractions produced by the former current be increased, prevented, or not affected. In the same manner, varying the strength of the irritating current will influence the effect of the polarization.

"May these results not be of service in explaining the hemiplegia and other symptoms following hemorrhage or tumor in the brain? The irritation would here be the excito-motor impulse. It is well known that when we increase the strength or intensity of this impulse by exciting a hemiplegic person, he will often voluntarily move the palsied limbs, but if the excitement is now removed the hemiplegia will again be apparent. Varying the strength of the irritation (*i. e.*, the excito-motor impulse) under these circumstances, determines whether, for the time being, the patient is hemiplegic or not. The polarizing influence is produced by the hemorrhage or some other lesion setting up a constant current in the brain fibres.

"Does the blood in apoplexy act as a polarizing agent? In some experiments on the peripheral motor nerves I found that coagulating blood would replace a polarizing current in its effects on the irritability of the nerves. In other experiments blood taken from the jugular vein of one animal was injected into the brain, in the vicinity of the corpus striatum of one side of another. Very frequently hemiplegia of the opposite side of the body was produced. Sometimes instead of being palsied, the animal was convulsed; and in still other instances no effect was produced.

"Ammonia is another polarizing agent which, injected in very small quantities in the neighborhood of a corpus striatum, will frequently produce hemiplegia. The glucoside saponin acts in the same manner."

Dr. Lautenbach goes on to say that he believes these to be the first cases of true hemiplegia ever being produced in any of the animals below man. In this he forgets at least Ferrier's experiments on monkeys, in which complete hemiplegia was produced by destruction of cortical grey substance.

As to his theory, which is expressed in his final conclusion, "that cerebral hemiplegia is due, not to destruction of brain-substance, nor to irritation or pressure, but to polarization," we cannot see that it has any special basis for its support, the exceptional and largely ill-reported cases to which he refers not being sufficient to invalidate the accepted notions. It is natural, moreover, to suppose that if the fibres conducting motor impulses from the centres exist, their severance or interruption would produce motor paralysis. Dr. Lautenbach must carry his objections so far as to the existence of routes of nervous conduction (which he does not), in order to be consistent, so it appears to us. The statement that it is a well known fact that hemiplegics often make voluntary movements of paralyzed limbs, under special excitations, must be taken with some allowance, if we are to understand the word "voluntary" in its usual sense. Special excitement may call out more complicated reflexes from higher centres than ordinary, as it will produce complex oaths and other emotional expressions in aphasic patients, but these are not by any proper use of the term to be included among voluntary acts. The comparative infrequency of hemiplegia in the lower animals is easily accounted for, or at least a very plausible hypothesis to account for it is afforded by the lesser development and importance of their higher centres, and the consequent relative approximation of the nature of all their voluntary acts to reflex ones.

HEMIOPIA FROM CORTICAL DISEASE.—In No. 21, of the *Centralblatt f. d. med. Wissenschaften* (1878), Dr. P. Baumgarten describes a case of left lateral hemiopia coming on suddenly after exposure to cold. The left half of the field of vision of both eyes was completely gone, the line of separation passing through the forea centralis, while the other part of the retina which still possessed visual perception was normal. This state continued without change during several months, until death occurred from cardiac paralysis in renal disease. The autopsy revealed an apoplectic cyst the size of a walnut in the substance of the right occipital lobe. Its lower wall was separated from the cavity of the right posterior horn by a layer of normal medullary substance several millimetres in thickness, while its upper wall was formed by the convolutions of the three gyri-occipitales, which were in a state of yellow softening, but still recognizable in shape.

There was found, besides, a spot of red softening of the size of a pea in the upper wall of the left anterior horn ; also an apoplectic cicatrix of half that size in the centre of the right thalamus. No other gross or microscopical lesions existed within the cranial cavity.

Paralysis of one-half of each retina from a lesion of the occipital lobe of the same side exactly corresponding to this case, was likewise obtained by Munk in his experiments on monkeys.

A case resembling the former is also described by Dr. Pooley, in the *Arch. of Ophthalmol. and Otology* (VI., I). A gentleman of 55 years consulted Pooley about visual hallucinations, epileptiform convulsions and maniacal attacks. Thirty years ago he had contracted a chancre and been treated with mercury, since which time no syphilitic symptoms had appeared. The patient appeared dizzy and mentally deranged and excited. He possessed a myopia one-tenth ; the visual power was normal. Pooley diagnosed cerebral syphilis and ordered iodide of potash, bromide of potash and bromide of ammonium. A few days subsequently a right lateral hemiopia of both eyes set in, the limit of the visual field passing through the centre of the retina. Within some weeks a paresis of the right side of the body and diminished sensibility of the right arm was noticed. Six months subsequently, vision was reduced to twenty-fiftieths, and the appearances of choked disc were found in the left eye.—Death.

The autopsy showed the left posterior lobe of the cerebrum enlarged, and in it there was found a yellowish-white, hard rounded tumor of about three-fourths of an inch in diameter and one-half inch in width. The left thalamus and the medullary substance surrounding it was softened. The tumor possessed all characteristics of a gumma. (*Wiener med. Woch.*, No. 20, 1878.)

TENDON-REFLEX IN GENERAL PARESIS.—Dr. Muhr (*Psych. Centralbl.*, No. 2, 1878) draws the following conclusions from an examination of fifty-one cases:

1. The contraction of the quadriceps muscle on percussion of the tendo patellaris occurs almost always in general paresis, even in advanced cases with paretic lower extremities.
2. In fifty-one cases the tendon-reflex was absent six times. These cases were not at all moribund or even ataxic.
3. Neither the condition of the pupils, nor any other clinical symptoms indicate whether the reflex can be produced. The lack of the reflex is found as an isolated phenomenon in different pareses.

From a consideration of Westphal's latest researches (*Arch. f. Psych.* VIII., H. 2), Dr. Muhr finally concludes, that an absence of the tendon-reflex in any case of general paresis is a positive sign of degeneration of the posterior columns, even when no ataxia is observed.

CONTRACTURES IN LOCOMOTOR ATAXIA.—M. Onimus presented to the Society of Biology (*Gaz. des Hop.*, July 30, 1878) a paper on the above subject. By contracture he wishes to imply simply a diminution of the normal muscular softness and a certain delay of relaxation after the voluntary contraction. Complete rigidity of muscular fibres is only a more intense degree of contracture. The first degree of contracture exists in a number of diseases of the central nervous system, even without alteration of the motor nerves. In locomotor ataxia, the transformation of the posterior spinal columns into a different tissue is a cause of excitation of the anterior columns, and thus provokes indirectly the contractures.

In this disease disturbances of the motility of the eyes are a frequent occurrence. Without denying the occasional occurrence of paralyses of the ocular muscles, Onimus claims that these disturbances are usually due to contractures of the affected muscles. The motor impairment of the extremities, however, is never traceable to any paralysis. But it can also not be completely explained on the basis of inco-ordination or loss of sensibility. Onimus, on the contrary, refers it to a degree of contracture of the muscles. The patients complain of muscular tension, they feel the rigidity of their muscles. They feel a mechanical restriction in their movements, which, it is true, they can overcome by a special effort. The observer can also notice the muscular rigidity; frequently the muscles are even tender to pressure.

A phenomenon hitherto but little noticed, is the delay of muscular contraction. The patients themselves often notice how much time elapses between the effort of volition and the contraction of the muscle. A similar delay of sensibility is even more striking, and is in fact well known.

That which characterizes essentially the inco-ordinated movements of ataxia, *is the suddenness of the movement, and its exaggeration when compared to the purpose intended.* The patient when attempting to move, feels a certain resistance, due to the contracture, and to overcome this he transmits to the muscle a greater impulse than is actually necessary. His motor centres are incorrectly informed of the static condition of the muscles on account of the muscular contracture. The retardation of the volitional effort only increases its intensity, hence the suddenness and exaggerated extent of all muscular movements. The latter, on the other hand, account for the fatigue so easily induced in ataxia.

HYDROPHOBIA AND SEXUAL EXCITEMENT.—As to the experimental production of rabies—its gêneration *de novo*—experimental veterinary science and the pathological observations of competent veterinarians in Europe furnish some facts worth recording. Fleming reports the case of a cross-bred spaniel, five and a half months old, which had never left its mother, never went out, and was naturally very quiet. When the mother became in rut, the young dog, excited by the odor, became extremely agitated, and at last refused food. Three days later, being asleep, it wakened suddenly, and flew savagely at the attendant. When taken to the infirmary of an eminent veterinary surgeon in Paris, rabies was diagnosed. The animal refused all food for the next three days; on the fourth, rabietic paralysis supervened; on the fifth it died. Another case of what Fleming styles spontaneous rabies, occurring under similar conditions, is noted in a late number of the *Veterinary Journal*, London. In a box adjoining the kennel of a male was placed a female in rut, the effluvia from which caused the most ardent veneric excitation. For fifteen days, placed in such tantalizing proximity, the unfortunate animal manifested the most extreme agitation, and finally went furiously mad. Similar results have been produced by confining males near a female in rut, particularly by M. Toppolin, who describes them as so constant as to leave no room for doubt as to the agency of intense sexual or other excitation in producing rabietic madness. It is not an unfamiliar fact that rabies have been experimentally produced in the inferior animals by inoculating them with man's saliva, as well as with the saliva of dogs not rabid. A Guinea pig thus inoculated became subject to violent convulsions, which could be excited at pleasure by dashing a little water at him. A rabietic pig, which lay torpid under the severest beating, could be excited to convulsions at pleasure by flirting a piece of white paper in its face.—*N. Y. Med. Record*, July 6.

MUSCULAR CONTRACTIONS IN HYSTERO-EPILEPSY.—MM. Regnard and Richet presented to the Society of Biology a report of the application of the graphic method in the study of hystero-epileptic attacks. (*Progrès Méd.* No. 29, 1878.) A myographic tambour is placed on some muscle and connected with a polygraph registering the muscular contraction. It was thus found that various attacks observed at different hours of the day were alike in character and duration, and even in the duration of the different stages of which attack consists. There is first a real muscle-tetanus, followed by clonic single contractions (secousses); hereupon the extensive movements and finally the passionate attitudes during which the contractions are not regular.

The authors state, besides, that hystero-epileptic attacks can be aborted by the application of strong constant currents, forty elements of Trouvé, and especially by sudden reversion of the direction. The continued use of the current will finally put a definite end to the attacks.

PATHOLOGY OF TETANUS.—Dr. E. Aufrecht detailed in the Med. Soc. of Magdeburg, Feb. 7, 1878 (*Deutsche med. Woch.*, 1878, Nos. 14 and 15), the lesions found in a case of tetanus. A laborer æt. 41, suffered from a complicated luxation of the thumb, treated antiseptically. Within a week tetanus set in, and although the median nerve was stretched, death occurred two days later. At the post-mortem the unaided eye could observe only a moderate effusion into the dura mater and considerable hyperæmia of the pia mater and gray substance of the cord. After three months' hardening in bichromate of potassium (5 per cent. sol.), the cord was examined microscopically.

In the lumbar portion, no change whatever was found in the ganglionic cells of the anterior cornua. The cells of the posterior cornua, however, were diminished in size and filled with pigment granules. Nucleus and nucleolus and most processes had completely disappeared. Some cells had become converted into homogeneous yellow globules. The morbid change increased in intensity upwards. In the middle of the dorsal cord no healthy cell could be found. The anterior cornua consisted of yellow, oval or rounded bodies without processes, nucleus or nucleolus. No pigment-granules were found in these bodies. The cells of Clarke's columns were also stained deep yellow, but their nuclei were still visible, while the nuclei had mostly disappeared in the cells of the posterior cornua.

The greatest change was found in the cervical portion. All ganglionic cells were of a diffuse rusty-red appearance; neither pigment-granules, nuclei nor nucleoli could be seen. The nerve-cells of the left side were *smaller* than those of the right; in fact, many of them were smaller than a normal nucleus.

The general changes in the gray substance were most marked in the cervical portion. In the ground-substance fine dark granules as well as larger pigment-granules were interspersed, especially in the substantia gelatinosa centralis around the central canal. The epithelium of the canal was normal; its calibre somewhat narrowed in some sections. Brilliant structureless vesicles resembling oil globules were besides found in the ground-substance of the white commissure and still more numerous around the central canal. They could not be derived from pre-existing cells, since according to Henle, no cellular structures whatever exist in the vicinity of the human central canal. Granules were also found in the white substance; here a number of nerve-fibres showed also a granular appearance of their medullary sheaths. All vessels were intensely injected with blood; in the adventitia dark granules were found. Hyaline masses were seen on the outside of some vessels, also within the central canal; at some spots they possessd the appearance of fibrine.

These observations Dr. Aufrecht interprets as parenchymatous inflammation, starting in the gray substance of the cervical cord and descending. The hyperæmia and exudation he regards as secondary; the granules and oil globules he considers the products of disintegration of the nerve cells.

ERYTHROMELALGIA.—This is the title which Dr. S. Weir Mitchell proposes for an affection which he first noticed in 1872, but of which he gives a more extended account in the last number (July) of the *American Journal of Medical Sciences.* The following is his account of the symptoms:

The patient, nearly always a man, after some constitutional disease, like a low fever, or after prolonged physical exertion afoot, begins to suffer with pain in the foot or feet; usually it comes in the ball of the foot, or of the great toe, or in the heel; and from these parts it extends so as to involve a large portion or all of the sole, and to reach the dorsum and even the leg. More often it is felt finally in a limited region of one or both soles, and does not extend beyond these areas. At first it is felt only towards night, and is eased by the night's rest; but soon or late, it comes nearer and nearer to the hour of rising from bed. In like manner, while at first it is made to increase only by excessive exertion afoot, by and by it comes on whenever the upright posture is assumed, or even when the foot is allowed to hang down. Since, however, the disease is not necessarily progressive, there are instances in which the pain never passes a definite limit. One case may for years have the trouble only in the evening; and a second may reach and remain at the point where only a long walk in summer causes it; a third may stand still, as it were, in a far more advanced stage of the malady, and though suffering horrible pain, become no worse; while in the gravest cases, more familiar signs of organic disease of the spinal cord may arise to shed light upon the pathology of the minor forms of the trouble.

In rare cases, the first pain is said to be an ache of the foot; but in the mass of instances, and soon or late in nearly all, the pain is of a burning character. "It is the pain of a burn;" the pain of mustard; "of intense sunburn;" at least these are the phrases used to describe it, and certainly the character of the suffering is often so well marked as to be clinically distinctive. In the milder cases it may come and go, or be present daily at some time, as upon exertion, and yet be but trifling in its intensity; while in severer cases the burning reaches the extreme of torture. The sufferer, when placed on his feet, rocks as if unsteady; and if his eyes be closed, may deceive the observer into the belief that he has before him a case of locomotor ataxia. Yet a vigorous effort of will is fully competent to preserve the balance; and this unstable equilibrium is not seen until, owing to the upright posture having been preserved for some minutes, the pain has risen to a maximum of anguish.

In the later stages of the disease the pain is throbbing, aching, and burning, owing, I suppose, to the vasal disorders, which are seen in some cases throughout, and always in the graver examples.

In every case, and at all stages, the pain is relieved or arrested by the horizontal position, and by cold. It is brought on and made worse by standing or walking; and in bad cases, by allowing the feet to hang down; while warmth, and, of course, heavy feet covers act in like manner. Summer is usually, not always, the season of greatest annoyance; winter, a time of comparative ease. The sufferer sleeps with uncovered feet, and goes about without stockings in his house; and finds, even in winter, a light slipper or a low shoe comfortable.

The next striking peculiarity of this disorder is the flushing of the part upon exertion. This symptom, which is usually absent in the very early stages, is a notable feature of the worst of the prolonged cases, and in some mild instances can always be brought on by great exertion afoot. In the graver examples, the area of greatest pain in the soles or hands is distinctly and permanently marked by a dull, dusky, mottled redness, as if the smaller vessels were always over-distended. In these, and in some of the less severe cases, the region of pain is in places tender, and firm pressure by the finger or hand will bring on increased pain, and even cause the whole foot or hand, or a part of it, to become red, just as it does when the man stands up.

The pain in these cases is also entirely inhibitory of walking, and if this action be persisted in, gives rise to intense redness, swelling from dilatation of vessels, and finally to blistering of the soles.

Where flushing is a part of the phenomena of this interesting malady, it comes on during the erect position, slowly in milder cases, and almost at once in others, and involves both veins and arteries. The foot gets redder and redder, the veins stand out in a few moments as if a ligature had been tied around the limb, and the arteries throb violently for a time, until at length the extremity becomes of a dark purplish tint.

In the worst cases, when the patient is at rest, the limbs are cold, and even pale. The flushing, which at first seems to be an active condition, accompanied with rise of temperature, in a few minutes becomes passive; that is, the arteries cease to throb, the heat lessens, and there is evidence of lessened axidation.

The less severe examples manage to get along by rest at intervals, but the worst cases are unable to stand for more than a moment, and the sufferer crawls on his hands and knees, keeping his feet off the floor, or is obliged to be carried about.

I have seen lately two examples in which the disease seemed to have been progressive, and to have been associated in the later stages with distinctive evidences of spinal disease, such as atrophic states, the pain belt (*douleur en ceinture*), partial losses of power, and other phenomena, which vary in the two cases alluded to. Also in one of them all the singular features which in the early stages were seen in the feet, were at a later stage exhibited in equal fullness in the hands, or rather in the hand, since one had been lost by amputation.

One other peculiarity is common to all of them. They are rarely amenable to treatment. They are aided for a time by cold and rest, but either they remain unchanged for years, or else, in rare instances become gradually worse.

As to diagnosis, I am aware of no other malady with which the bad cases of this trouble can be confounded; but there are certain other more or less painful affections of the feet, with which the lighter forms might be confused * * * (gout, rheumatism, syphilitic tender feet).

Dr. Mitchell gives full accounts of a number of cases of this affection, which he thinks is connected with some cerebro-spinal or spinal lesion, and may yet be found to correspond to limited lesions of definite tracts in the brain or cord. Some of the cases are of his own observation, others were reported by Vulpian, Graves and Paget. He also gives for comparison, accounts of several cases of a very similar and troublesome affection with which this might be confounded; that described by Prof. Gross as *podynia*, but which differs from the one above described in being less of an apparently vaso-motor nature, and due probably to low inflammation of the joint structures of the foot.

HYPERÆSTHESIA FROM SECTION OF THE SPINAL CORD.—Dr. W. Koch, *Virchow's Archiv*, Bd. 73, Heft II., p. 273. Our previous knowledge on this subject may be summed up as follows: Section of one lateral half of the cord is followed at once by a hyperæsthesia of the skin of the other side of the body, behind the line of section The hyperæsthesia diminishes in some degree after a few hours or days, and remains in this state of intensity for many weeks, or even two years (Brown-Séquard), to be superseded finally by diminished sensibility; complete section of one-half of the cord, reduces the sensibility of the other side of the body more or less. Hyperæsthesia of the other side of the skin occurs when its corresponding half of the cord has also been mutilated. If after one-half of the cord has been divided, the knife severs a portion of the grey substance of the other half, the hyperæsthesia still continues, but it diminishes when about three-quarters of the grey substance (of the second half) are cut transversely. A single narrow bridge of grey substance, however, suffices to maintain a feeble degree of hyperæsthesia (Schiff). Attempting to localize detailedly the strands, section of which increases the sensibility, Schiff names simply the posterior white columns. Tuerck, on the other hand, referred the phenomenon to section of the lateral columns and the proximate grey substance; he experimented mainly in the cervical region, where Schiff claims that the parts mentioned are but the continuation of the posterior columns of the lower part of the cord. According to Ludwig and Woroschiloff, hyperæsthesia of the hind legs follows a simple section of the internal half of the middle third of the lumbar lateral columns. Experimenting upon rabbits, Koch found the hyperæsthesia not limited to the skin, but to extend as well to the fascia, periosteum and especially the joints. In fact it is most marked in the latter parts, so that any extensive movement of a joint produces evidence of great pain. A section not lower than the level of the third lumbar vertebra produces hyperæsthesia in the entire hind extremity ; the trunk and fore leg participate when the section occurs at the level of the sixth cervical vertebra. If the cord is severed one vertebra below, the fore legs are exempt.

With Woroschiloff, Koch agrees in localizing the necessary lesion in the lumbar region in the internal half of the middle third of the lateral column (corresponding to Flechsig's lateral cerebellar tracts). This strand passes towards the surface in ascending the cord, so that in the cervical region hyperæsthesia is produced by a section implicating only the outer half of the lateral column. The greatest possible degree of hyperæsthesia is at once produced by dividing the external quarter of one-half of the medulla oblongata. In no locality is a lesion of the grey substance necessary to obtain this result.

Koch succeeded in producing separately hyperæsthesia of the skin and of the joints. The fibres, section of which renders the joints hyperæsthetic, are found in the cord to the outside of the fibres related to the sensibility of the skin. The two strands, however, intermingle at the line of contact to such an extent, that the greatest possible degree of hyperæsthesia of either the skin or joints is obtainable only by dividing more than one strand. The longest duration of the increased sensibility which Koch ever met was 20 days (survival of the animal ?). The feeble hyperæsthesia resulting from incomplete section does not seem to be as permanent.

A hyperæsthesia is sometimes observed clinically when due to a peripheral lesion, such as pressure of a tumor upon a nerve, or suppuration around the posterior roots. Vulpian claims even to have produced a hyperæsthesia experimentally by gradually ligating a mixed nerve. Notwithstanding numerous attempts Koch could not repeat this experiment successfully.

An exquisite hyperæsthesia of the entire body is produced by removal of the entire encephalon above the medulla oblongata in young rabbits. This diminishes in intensity after fifteen minutes, but it is still noticeable after the lapse of several hours. In this state of hyperæsthesia, the sensibility may be still more exalted by a hemi-section of the cord. The parts whose sensibility is ordinarily increased by such a section, become now still more hyperæsthetic, so that their irritation will induce the animal to cry, which cannot be done by irritating other less hyperæsthetic parts. The possibility of producing hyperæsthesia by and after removal of all parts above the medulla, proves the spinal origin of the hyperæsthesia. The crying of the animal under such circumstances overthrows, moreover, the validity of drawing a line between conscious and unconscious sensibility. The latter was usually considered a simple reflex, the former a reflex complicated with psychic excitations as manifested by the cry. But since at least in mammals no psychic functions are attributed to the medulla and cord, this distinction is no longer tenable.

As a matter of especial interest Koch finally found, that the hyperæsthesia could be made to disappear by irritating with a strong electric current any part anterior to the spinal section. This succeeded also after removal of the encephalon.

REFLEX TREMOR IN HEMIPLEGIA —At the session of the Soc. de Biologie, June 1 (rep. in *Le Progrès Médicale*), M. Dejerine made a communication on the existence of reflex tremor in the sound leg in certain cases of hemiplegia. Reflex tremor in hemiplegia has been noticed several years since ; to produce it, it is only necessary to flex the leg strongly on the thigh, when there is caused a trembling, feeling to the hand of the observer like a regular series of shocks. It is known under the name of reflex hemiplegic tremor, and is rather commonly observed.

Up to the present time this tremor had been observed only in the limb of the paralyzed side. A series of researches by M. Dejerine show very clearly that it may appear, with absolutely similar phenomena in the lower limb of the sound side, and that it may be found in a rather large number of cases.

In some fifteen hemiplegics observed with reference to this symptom, he observed it five times, and in these five cases the tremor was so marked in the lower limbs that he at first thought he had to do with cases of paraplegia by compression of the cord, or of multiple sclerosis. But in all of these the member of the well side was intact as regards motion and sensibility.

The explanation of this phenomenon is rather difficult since, up to the present time, autopsies have been lacking. May it not be that the lateral sclerosis, which is constantly present on the paralyzed side in old cases, has invaded the sound side ?

M. Gubler remarked on M. Dejerine's communication, that tremor is a phenomenon of imperfect conduction, and could be produced under various conditions by placing the member in such a posititon as to compress the nerves.

The following are the titles of some of the recent articles on the Pathology and Pathological Anatomy of the Nervous System:

SCHULTZE, The Anatomical Alterations in Acute Atrophic Paralysis of the Adult (Poliomyelitis Acuta Anterior), *Virchow's Archiv*, LXXIII., 3; MANN, Cerebral and Spinal Anæmia, *Phil. Med. Times*, Sept. 28; GLYNN, On Cases of Cerebral Tumor and other Forms of Brain Disease, with Special Reference to the Doctrine of Localization, *Brit. Med. Journal*, Sept. 28; V. HOLST, A Case of Neurosis from Shock, *St. Petersburg. med. Wochenschrift*, No. 32; SCHULTZE, A New Pathologico-Anatomical Discovery in Tetany, *Centralbl. f. Nervenheilk.*, No. 8; HALLAGER, Cases of Progressive Facial Atrophy, *Hospitals Tidende*, Sept. 11 and 18, 1878; KRAFFT-EBING, On the so-called Querulant Insanity, *Allg. Zeitschr. f. Psychiatrie*, XXXV., 4; DAY, Neurosal Affections of the Heart in Children, *Practitioner*, Sept.; BOUTEILLE, Sanguineous Tumors of the Pavilion of the Ear, *Ann. Med. Psychol.*, July; CULLERRE, General Paralysis and Insanity, *Ibid;* TILING, On the Classification of Insanity, *Psychiat. Centralbl.*, No. 3; SAWYER, Clinical Lecture on the Causes and Cure of Insomnia, *Lancet* (Am. Repr.), September; CALDWELL, A Review of the Neurosis of the Pneumogastric and Sympathetic Nerves, &c., *Virginia Med. Monthly*, October; BRUNTON, Reflex Action as a Cause of Disease, and Means of Cure, *Brain*, July; HUTCHINSON, Notes on the Symptom-Significance of Different States of the Pupil, *Ibid;* BUZZARD, On a Prolonged First Stage of Tabes Dorsalis, &c , *Ibid;* LAWSON, On the Symptomatology of Alcoholic Brain Disorders, *Ibid;* FOTHERGILL, The Neurosal and Reflex Disorders of the Heart, *Ibid;* SCHULTZE and RUMPF, Degenerative Processes in the Human Spinal Cord, *Centralblatt f. d. med. Wissensch.*, No. 37.